

## University of Dundee

### University of Dundee, School of Life Sciences, Annual Report 2019

Hardee, Erin; Cameron, Amy; Floyd, Ali; Stanley-Wall, Nicola; Post, John; Stephenson, Erika

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# Public Engagement



School of Life Sciences  
University of Dundee

**Annual  
Report  
2019**



# our aims



**We believe public engagement is a vitally important part of what we do:**

- It increases the impact and value of our research.
- It contributes to a scientifically literate culture.
- It helps science remain relevant to society.
- It builds trust between communities within and beyond academia.
- It diversifies the skills and opportunities available to our staff and students at all stages of their careers.

Our work in 2019 was led by our five-year public engagement strategy, which was developed in consultation with our staff and students in 2017.

In it, we state four main aims that underpin all of our public engagement planning, development and delivery. These are:

- Build on our creative partnerships to deliver a high quality, innovative engagement programme.
- Engage a diverse range of people with our research.
- Consult with our local communities to widen our reach and meet their needs.
- Promote and support a culture of active participation in public engagement within our life sciences community.

As the Public Engagement team, we have committed to do the following each year:

- Provide a school-wide support structure for public engagement.
- Provide professional support and guidance, including training.
- Provide opportunities to get involved with public engagement.
- Provide funding and resources for public engagement activities.
- Build and maintain relationships with external partners.

Our team produces a comprehensive calendar in advance of each year, with events, training, drop-in sessions and other key dates outlined. There is also capacity for flexible, bespoke support for staff and students looking to get involved with the School of Life Sciences' public engagement programme.





# Life Sciences Community



## What did we do?

One of our strategic goals is to support a culture of active participation in public engagement within the SLS community. We do this by providing training, opportunities to take part in activities, and support for funding. In 2019, we:

**Ran 15 training sessions for 155 academics and postgraduates on a range of topics**

Examples include:

- > Presentation skills
- > Slide design
- > Bespoke interactive activity creation
- > Accessible language

**Facilitated over 25 opportunities to get involved**

Examples include:

- > Festivals
- > Community work
- > Schools
- > Art and science collaborations
- > Online opportunities

**Provided advice for seven grant applications**

Examples include:

- > New grants
- > Grant renewals

We also wrote a guidance document for future requests that was approved by School of Life Sciences Research Committee, which will be available to all grant writers to support their public engagement submissions.



## With our support, staff and students:

- > Took **Incredible Immunology** to a new venue – Arbroath High School – and engaged over 100 S1 pupils in hands-on learning about immunology and science.
- > Participated in **Angus schools careers night**, sharing insights into STEM careers and study to older secondary pupils and their parents.
- > Engaged over 1000 people at **Plant Power** day at Dundee Botanic Garden.
- > Created the **Medicine Maker** badge with Girlguiding Dundee along with a series of activities and events to inspire girls and young women with science.
- > Took part in **Careers Hive with Edinburgh Science** at the National Museum of Scotland, reaching around 600 pupils as they made their first subject choices.
- > Took part in several iterations of the **I'm a Scientist, Get Me Out of Here!** online competition, engaging with school pupils from across the UK.
- > Ran a visit to the School of Life Sciences for high school pupils from **France**, exploring the work of the Wellcome Centre and Drug Discovery Unit.
- > Presented **Parasiteseeing: Departure Lounge**, a new science art exhibition, in LifeSpace Science Art Research gallery.
- > Ran **Drug Design/Drug Discovery**, an interactive family day as part of Dundee Design Festival in LifeSpace Science Art Research gallery.
- > Took part in **Stobfest**, an annual local festival in Stobswell, as part of WCAIR's community engagement work.
- > Devised new games to play at outdoor events for **Celebration in the Park** with Stobswell Forum.
- > Reached diverse audiences with **Dundee Women's Festival**.
- > Championed the **Work Experience Week**, which saw pupils from across Scotland coming on-campus for a week to get hands-on in the labs, discuss ethics and learn more about the world of research.
- > Ran another sell-out Street Food as part of **Festival of the Future**, bringing our researchers together with local food and drink makers in an inspiring and delicious evening for adults.
- > WCAIR researchers took part in **Dundee Science Festival**, delivering a weekend of fun activities for families. They also presented a weekday lunchtime talk for adults on the history of the Drug Discovery Unit.
- > Developed a brand-new **Drug Discovery 'escape room'**, a puzzle-based educational game, collaborating with experts from Agent November.
- > Worked with **Dundee Print Collective** on a project that will create a new exhibition for LifeSpace Science Art Research gallery in early 2020.
- > Collaborated with an artist and patient groups to create **Misprints**.
- > Helped primary pupils develop their stop-motion animation skills in **Animating Science** to make wildly creative films about science topics.
- > Reached out to local communities at **Angus STEMfest**.
- > Led the **Gatsby Plant Science lectures**, which introduced secondary pupils to considering the many ways plant sciences could address global challenges such as climate change and food insecurity.
- > Engaged and entertained families at **Lochee Family Fun Day**.
- > MRC-PPU continued to build their partnership with local schools and communities with the **MRC Festival of Research**.



# Signs of Success: Life Sciences Community

“ I do believe now more than before that relating the academic research to public through an intermediate such as art or conversations is important to keep ‘science’ humane and tangible for the public. This will allow researchers to view their work as more meaningful and allow the public to regain trust to scientists.

Researcher feedback from *Misprints* interactive exhibition

Great session, very thought-provoking.  
Lots of ideas.

Training session feedback

” I loved to see the kids get excited.

Plant Power participant



## Case Study Tabletop Activity Design Training

**PEOPLE INVOLVED:** 7 staff and researchers from the School of Life Sciences and the School of Medicine

**WHAT WAS IT?** A training session designed to guide researchers through the conceptualisation and development of a hands-on activity based on their own research. The training was created in response to discussions with several new Principal Investigators, some of whom expressed that their lab members were keen to do public engagement but did not feel confident or able to develop an appropriate activity based on their research.

**KEY OUTCOMES:** All participants reported that their confidence in taking part in public engagement had increased.

**FUTURE PLANS:** We will be running the session again in future for new participants in conjunction with opportunities to take part in public engagement activities to allow for practical experience.



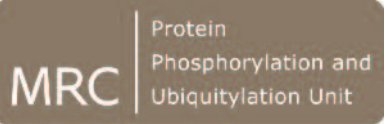
## Case Study Misprints, A Science-Art collaboration

**PEOPLE INVOLVED:** 15 scientists from MRC-PPU, artist Daksha Patel, 40 public

**WHAT WAS IT?** Misprints was an interactive exhibition held at Dundee Contemporary Arts, Dundee where research scientists engaged in dialogue with the general public about Parkinson's research facilitated by artwork created by the artist. These works developed as the result of an artist residency initiated by Prof. Miratul Muqit with artist/researcher Daksha Patel.

**KEY OUTCOMES:** Daksha Patel created over 100 laser prints from her pencil drawings that she created in response to her residency. Conversations between the public and researchers were captured to understand how using an artwork (and not a scientific image) as a starting point for conversations changed the type of discussions undertaken. We wanted to see if the power dynamic of an expert speaking to a non-expert was dispelled and replaced with a more open exchange.

**FUTURE PLANS:** A number of opportunities have arisen from this project which include presentations at art and scientific conferences, publications and news ways to exhibit the works in the future.





## What did we do?

Our public engagement work is aimed at a diverse range of people, including schools, patient groups, families and adult audiences. Each group allows us to learn from different viewpoints and experiences to make our research more relevant and impactful. In 2019 we engaged with many people, including:

### With schools:

Reached **450** students with 14 visits to schools

Hosted **85** students in the School of Life Sciences

Welcomed **17** students from **7** schools during the 2019 Work Experience Week

### With public:

Hosted **350** members of public at 9 events within School of Life Sciences

Met over **1,000** members of the public at **12** events in communities

Engaged with over **500** visitors the Parasiteseeing: Departure Lounge exhibition in LifeSpace Science Art Research gallery

## Signs of Success: Local Communities

“ I feel like I understand better the time and effort it takes to become a scientist, it takes a lot longer than I expected to develop a drug.

Work experience pupil feedback

Very informative about work being done by the University, very friendly and approachable people.

Street Food audience member

This is so fun! Please do more stuff like this in future.

Parasiteseeing exhibition visitor



## Case Study Parasiteseeing: Departure Lounge



**PEOPLE INVOLVED:** 2 artists from Lancaster University, 10 members of WCAIR staff, external curator in partnership with DJCAD, 508 public visitors

**WHAT WAS IT?** A science art exhibition in LifeSpace Science Art Research gallery, this was scaled up from a previous project as part of NEEON (North East of North) Digital Arts Festival. The exhibition was set as an airport departure lounge, and explored the way the Leishmania parasite travels, around bodies, across the world and through time.

**KEY OUTCOMES:** We built a wall of the exhibition where people could give feedback while maintaining the exhibition world. These speech bubbles gave us insights into the different responses to the parasite and exhibition. Some indicated a friendliness towards science, while others showed learning about the parasite. They evidenced our stated aim of improving people's enthusiasm for science.

**FUTURE PLANS:** The exhibition is now in Dundee Science Centre where it is reaching new audiences. Beyond this, we are planning on taking the work on tour initially to WCAIR's partner institutions in Brazil where there has been significant interest.



## School of Life Sciences



### Case Study Work Experience Week 2019

**PEOPLE INVOLVED:** 17 pupils from Scottish secondary schools, members of the School of Life Sciences, the School of Medicine, and the James Hutton Institute.

**WHAT WAS IT?** A weeklong work experience opportunity for pupils from traditionally under-engaged backgrounds. Pupils took part in careers speed networking, tours of the Life Sciences complex, several lab placement sessions, ethics discussions, sessions on personal statement writing and the degree opportunities at the University of Dundee, and visits to the School of Medicine and James Hutton Institute.

**KEY OUTCOMES:** We gathered feedback in a variety of ways, including daily written evaluation and a group poster presentation at the end of the week. Pupils reported a greater understanding of the different routes into a career in life sciences research increased familiarity and comfort with hands-on practical work and new views on ethical matters and critical thinking.

**FUTURE PLANS:** Students from this year's work experience have already been in touch for letters of support and further lab placement opportunities. We will follow up with them to see which, if any, choose to attend the University of Dundee starting in September 2020..



# Creative Partnerships



## What did we do?

Working in partnership is an important aspect to good public engagement, as it allows us to learn from experts in many different fields and reach new audiences. In 2019 we:

- > Formalised several existing partnerships, including:
  - Dundee Contemporary Arts
  - NEoN (North East of North) Digital Arts Festival
  - Dundee Women's Festival
- > Worked with six food and drink providers in our Street Food event as part of Festival of the Future.
- > Developed a new strategic partnership with Stobswell Forum.
- > Created one 10-minute science animation with two Angus primary schools through Animating Science.
- > Collaborated with Girlguiding Dundee to develop a new 'Medicine Maker' badge and pack, which has reached over 600 girls and young women across the UK.





## Signs of Success: Creative Partnerships

“ The challenge pack for this looks amazing! Really practical but fun for all ages.

Girlguiding leader



Thank you so much for having us along! We found it a really valuable experience.

Street Food partner

I learned to co-operate, pay attention, animate and play with it. It helped me be creative.

Animating Science pupil feedback



## Case Study Plant Power



Dundee Botanic Garden  
University of Dundee



**PEOPLE INVOLVED:** Staff and students from the Division of Plant Sciences, School of Life Sciences and James Hutton Institute, Dundee Botanic Garden staff, Friends of University of Dundee Botanic Garden

**WHAT WAS IT?** Plant Power (also known as Fascination in Plants Day) takes place annually at Dundee Botanic Garden. Plant Sciences and James Hutton Institute run a plant science strand which involves a number of interactive hands-on activities. This takes place alongside the other events organised by the Botanic Garden.

**KEY OUTCOMES:** Provide an opportunity for staff and students to develop activities based on their research and improve their public engagement skills. Enhance partnership working between Plant Sciences, James Hutton Institute and Dundee Botanic Garden.

**FUTURE PLANS:** With the new Dundee Botanic Garden Curator now in post, this will allow for the event to evolve with a fresh perspective and ideas. The activities developed for the event will be made into box activities that other people can borrow.



## Case Study Animating Science with Dundee Contemporary Arts

**PEOPLE INVOLVED:** Education staff and animators from Dundee Contemporary Arts, teachers and pupils from Angus primary schools, scientists from the School of Life Sciences

**WHAT WAS IT?** A partnership between Dundee Contemporary Arts and the School of Life Sciences which uses stop motion animation to engage primary school pupils with science topics. With input from research scientists and professional animators the pupils are supported to create their own short science films which showcase their learning and their own voices and stories.

**KEY OUTCOMES:** Participating classes showed significant increase in science engagement and knowledge as a result of taking part in the project. A 'film premiere' was shown at the schools' leaving days to fellow pupils as well as families.

**FUTURE PLANS:** 5 more classes will take part in Spring/Summer 2020, exploring topics chosen by the pupils. The School of Life Sciences is in discussion with the Scottish Schools Education Research Centre about using the Animating Science format within the STEM Young Leader programme across Scotland.

**DCA**  
Dundee Contemporary Arts





# Challenges



**In our pursuit of supporting excellent public engagement we encounter challenges.**

Doing public engagement well requires a lot of different inputs, but there are finite resources. We must work to find a balance between our ambitions and the capacity of the public engagement team and participating researchers.

We need continued public engagement funding from a variety of sources to maintain an excellent standard of engagement activity.

Partners can struggle with availability and may also have needs and wants that are different than ours.

We need to continue to be driven by our strategy when planning events to ensure they help us meet our aims.

Measuring the impact of our work is difficult. It's a challenge that faces not just us, but the entire public engagement sector. As leaders in the field we need to continue to drive the conversation forward.





# Goals for 2020

## Continue:

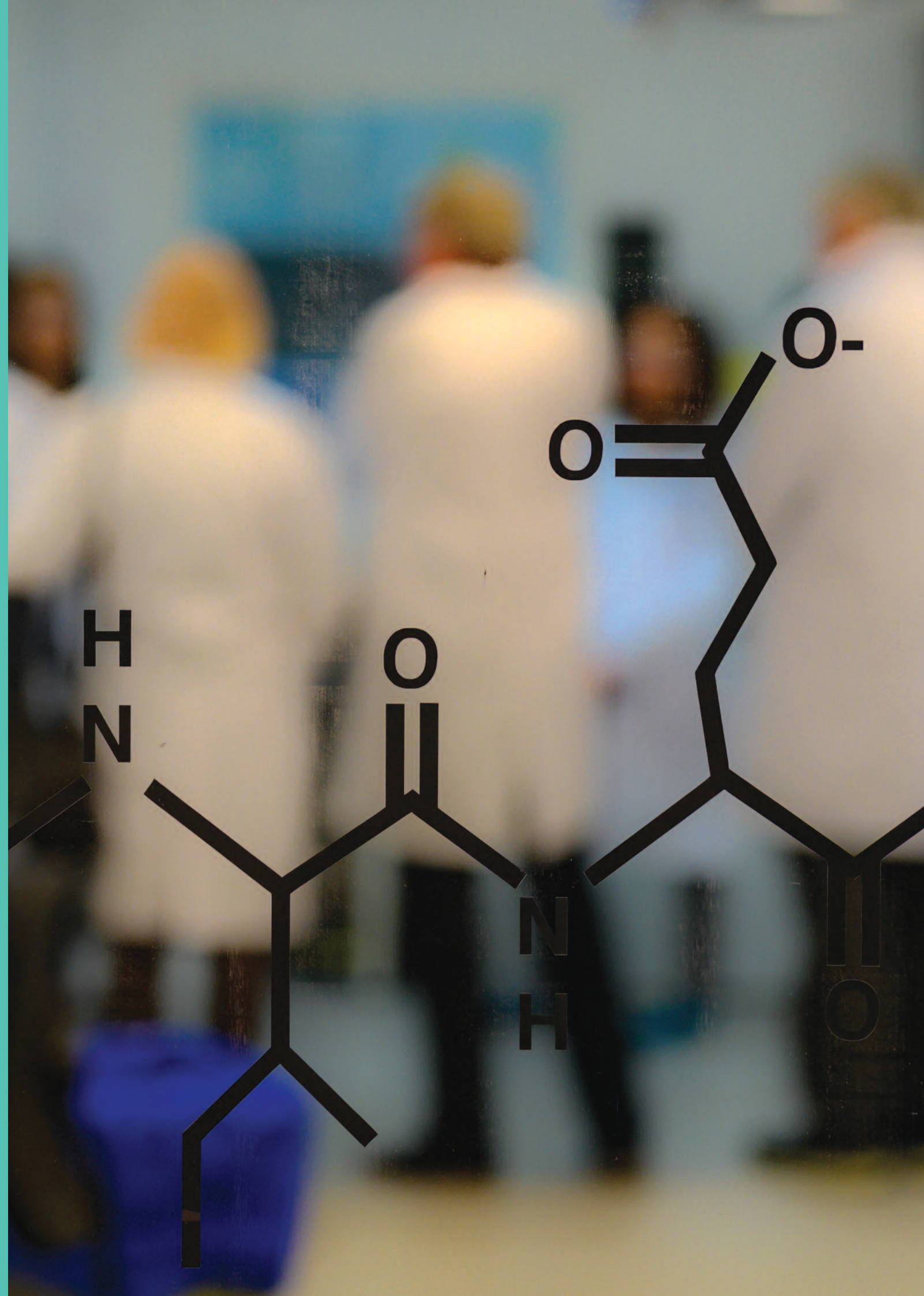
- Formalising successful partnerships
- Running events that reach varied audiences
- Supporting our staff and students through training, advice and resources

## Build on:

- Strengthening our relationships with local communities
- Reporting, evaluating and assessing impact in all we do
- Cross-university networks and effective sharing

## Focus on:

- The diversity of participants and audiences taking part in public engagement
- Audience needs and inputs
- Sharing knowledge and resources widely





# Our Team

With experience in the world of research, museums, science centres and theatre, the School of Life Sciences' public engagement team brings a wealth of expertise to the table.

## **Prof. Nicola Stanley-Wall, Academic Lead for Public Engagement**

Nicola is the Head of the Division of Molecular Microbiology and has a leading voice in the School's public engagement for over ten years. She represents the School at the University-wide Public Engagement Forum and was heavily involved in the University's Watermark application to the National Coordinating Centre for Public Engagement.

## **Dr Amy Cameron, Public Engagement and Communications Officer**

Amy has a background in academic research as prior to joining the School, she was a Postdoctoral Researcher in the School of Medicine at the University of Dundee. Throughout her research career, Amy participated in public engagement activity and teaching. In the public engagement part of her role in the School of Life Sciences, Amy works closely with public engagement colleagues within the School and across the University to deliver a programme of activity and the process that underpins it such as evaluation frameworks.

## **Erin Hardee, Schools Outreach Organiser**

Erin supports outreach to local schools, builds partnerships and contributes to strategic development of public engagement both within the School of Life Sciences as well as the wider University. Her newest opportunity is a role within the British Science Association's Inclusive Science Engagement Network, which will be looking at ways to embed good practice and widen participation in public engagement.

## **Ali Floyd, WCAIR Public Engagement Manager**

Ali has a microbiology degree from the University of Glasgow. He has previously worked for Glasgow Science Centre and Edinburgh International Science Festival. Prior to Dundee, he was the Science Engagement Officer at the National Museum of Scotland, leading on biomedical programming and software interactive development for the Masterplan Phase 3 project. With his WCAIR role he has led on science art projects such as Parasiteseeing, creating a new piece of theatre with Dundee Rep: Engage, and community work with the Stobswell Forum.

## **Ailsa Mackintosh, PE administrator**

Ailsa as Public Engagement secretary provides administrative support for the public engagement team. The role within the PE Team includes assisting the organisation of events and co-ordinating personnel as well as providing support at events. She supports the Public Engagement team in responding and dealing with queries relating to PE and Outreach. Within the Team she is an invaluable organiser and supports many events on the day.

## **Public Engagement Divisional Champions:**

Biological Chemistry and Drug Discovery

Computational Biology

Cell and Developmental Biology

Cell Signalling and Immunology

Gene Regulation and Expression

Molecular Microbiology

MRC Protein Phosphorylation and Ubiquitylation Unit

Plant Sciences

D'Arcy Thompson Unit

**Professor David Gray**

**Professor Geoff Barton**

**Dr Jens Januschke**

**Dr Sharon Matthews**

**Professor Tom Owen-Hughes**

**Professor Nicola Stanley-Wall**

**Dr Paul Davies**

**Dr Jorunn Bos**

**Professor Jenny Woof**







**If you would like to discuss our public engagement strategy or forthcoming programme please do get in touch.**

Email: **[SLS-PublicEngagement@dundee.ac.uk](mailto:SLS-PublicEngagement@dundee.ac.uk)**

**Come to our drop-in sessions the third Wednesday of every month in the CTIR Street.**

**#whyengage**

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